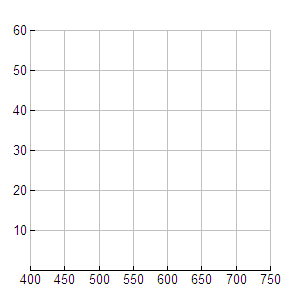
|  |  |
| --- | --- |
| **Number of boats registered (thousands)** | **Number of manatees killed** |
| 447 | 13 |
| 460 | 21 |
| 481 | 24 |
| 498 | 16 |
| 512 | 24 |
| 513 | 20 |
| 526 | 15 |
| 559 | 34 |
| 585 | 33 |
| 614 | 33 |
| 645 | 39 |
| 675 | 43 |
| 711 | 50 |
| 719 | 47 |
| 727 | 54 |

1. Make a scatter plot of the data below. Find M1\_\_\_\_\_, M2\_\_\_\_\_M3\_\_\_\_\_\_.

2. Determine the median-median line for the data and graph it below. Label it A.

Median-Median Line Equation:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



3. Draw an ellipse around your data. Use the major and minor axes to approximate the correlation. Show your work!

4. Use your calculator to find the following:

a) \_\_\_\_\_\_\_ b) \_\_\_\_\_\_\_ c) *Sx* =\_\_\_\_\_\_\_\_ d) *Sy* = \_\_\_\_\_\_\_\_

e) Least Squares Line Equation:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ R = \_\_\_\_\_\_\_\_\_

Graph it on the axes above. Label it B.

5. What it the residual for 675 boats using Median-Median? \_\_\_\_\_\_\_\_ Least Squares? \_\_\_\_\_\_\_\_\_

6. If the number of manatees killed when 727 boats were registered was 100,

a) which equation(s) above would change and why?

b) which equation(s) above would not change and why?

7. Find the Root mean square error, showing all work.